

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: **Anand G. Dabak, et al.**

Docket No.: **TI-28984A**

Serial No.: **TBD**

Examiner (parent case): **Ferris, Derrick**

Filed: **Herewith**

Art Unit (parent case): **2663**

For: **SPACE TIME TRANSMIT DIVERSITY  
FOR TDD/WCDMA SYSTEMS**

Conf. No.: **TBD**

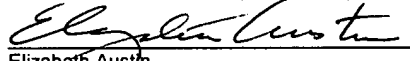
**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
Alexandria, VA 22313-1450

Dear Sir:

**MAILING CERTIFICATE UNDER 37 C.F.R. § 1.8(A)**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:  
Commissioner for Patents, Alexandria, VA 22313-1450.

  
Elizabeth Austin

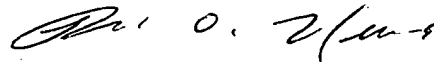
4/13/2004  
Date

Applicant wishes to bring to the attention of the Patent and Trademark Office the information noted on the enclosed PTO-1449. Copies of the listed references are enclosed.

This information disclosure statement is being mailed before receipt of a first office action on the merits in accordance with 37 C.F.R. 1.97(b)(3).

No fees are due, however, should the Office decide otherwise, please charge the necessary fee of \$180 to the deposit account of Texas Instruments Incorporated, Account Number 20-0668.

Respectfully submitted,



Ronald O. Neerings

Attorney for Applicants

Reg. No. 34,227

Texas Instruments Incorporated  
P. O. Box 655474, MS 3999  
Dallas, Texas 75265  
(972) 917-5299

Please type a plus sign (+) inside this box ☐

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for Form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete If Known</b>	
				Application Number	<b>TBD</b>
				Filing Date	<b>Herewith</b>
				First Named Inventor	<b>Anand G. Dabak, et al.</b>
				Group Art Unit	<b>TBD</b>
				Examiner Name	<b>TBD</b>
Sheet	<b>1</b>	of	<b>2</b>	Attorney Docket No.	<b>TI-28984A</b>

U.S. PATENT DOCUMENTS						
Exam. Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Doc.	Date of Pub. of Cited Doc. (mm-dd-yy)	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	AA	5,737,327		Fuyun Ling, et al.	04/07/1998	
	AB	6,178,196 B1		Ayman F. Naguib, et al.	01/23/2001	
	AC	US 2001 / 0024426 A1		Ariela Zeira, et al.	09/27/2001	
	AD	6,317,411 B1		Nicholas W. Whinnett, et al.	11/13/2001	
	AE	US 2002 / 0027948 A1		Donald Schilling	03/07/2002	
	AF	6,449,314 B1		Anand G. Dabak, et al.	09/10/2002	
	AG	US 2003 / 0058929 A1		Earl C. Cox, et al.	03/27/2003	
	AH					
	AI					
	AJ					
	AK					
	AL					
	AM					
	AN					
	AO					

FOREIGN PATENT DOCUMENTS								
Exam. Initials*	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Doc.	Date of Pub. of Cited Doc. (mm-dd-yy)	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>2</sup> (if known)				
	BA		EP 1 006 676 A2		Texas Instruments Inc	7/06/2000		
	BB		EP 1 056 237 A2		Texas Instruments Inc	29/11/2000		
	BC							
	BD							
	BE							
	BF							
	BG							
	BH							
	BI							
	BJ							
	BK							
	BL							

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>See attached Kinds of U.S. Patent Documents. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Alexandria, VA 22313-1450.

Please type a plus sign (+) inside this box ^



PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for Form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete If Known</b>	
				Application Number	<b>TBD</b>
				Filing Date	<b>Herewith</b>
				First Named Inventor	<b>Anand G. Dabak, et al.</b>
				Group Art Unit	<b>TBD</b>
				Examiner Name	<b>TBD</b>
Sheet	<b>2</b>	of	<b>2</b>	Attorney Docket No.	<b>TI-28984A</b>

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Exam. Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	CA	"A Novel Transmission Diversity System in TDD-CDMA", Incheol Jeong, et al., Spread Spectrum Techniques and Applications, 1998. Proceedings., 1998 IEEE 5 <sup>th</sup> International Symposium, 09/02/1998-09/04/1998, Vol. 3, pp. 771-775	
	CB	"A Simple Transmit Diversity Technique for Wireless Communications", Slavash M. Alamouti, IEEE Journal on Selected Areas in Communications, IEEE Inc., New York, US, Vol. 16, No. 8, 10/1998, pp. 1451-1458, XP002100058, ISSN: 0733-8716	
	CC	"Equalization and Multi-User Detection for Space Time Block Coding Based Transmit Diversity (STTD) in Frequency Selective Channels", Anand G. Dabak, et al., IEEE, 2000, VTC 2000, pp. 506-513	
	CD	"Space Time Block Coded Transmit Antenna Diversity Scheme for WCDMA", Anand G. Dabak, et al., Wireless Communications and Networking Conference, WCNC 1999, IEEE New Orleans, LA, USA 21-24 Sept. 1999, pp. 1466-1469, XP010353636, ISBN: 0-7803-5668-3	
	CE	"3 <sup>rd</sup> Generation Partnership Project; Technical Specification Group Radio Access Network; Physical Channels and Mapping of Transport Channels onto Physical Channels (TDD) (3G TS 25.221 version 3.1.0 (1999-12))", Technical Specification, pp. 2-47	
	CF	"UTRA FDD and TDD, a harmonized proposal for IMT-2000", W. Mohr, International Conference on Communication Technology, 10/22-24/1998, Communication Technology Proceedings, 1998. ICCT '98., Beijing, China, pp. S22-03-1 to S22-03-5	
	CG	"Zero Forcing and Minimum Mean-Square-Error Equalization for Multiuser Detection in Code-Division Multiple-Access Channels", Anja Klein, et al., IEEE Transactions on Vehicular Technology, Vol. 45, No. 2, 05/1996, pp. 276-287	
	CH		
	CI		
	CJ		
	CK		
	CL		
	CM		
	CN		
	CO		
	CP		
	CQ		
	CR		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Unique citation designation number. <sup>2</sup>Applicant is to place a check mark here if English Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Alexandria, VA 22313-1450.